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Three new species of *Oxyomus* Dejean, 1833 (Scarabaeidae: Aphodiini) from the Oriental Region

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Abstract. Three new species of the genus *Oxyomus* Dejean, 1833 are described and illustrated: *Oxyomus malgorzatae* sp. nov. from Java, *O. nowaki* sp. nov. from Sumatra, and *O. mencli* sp. nov. from Borneo. A key to species occurring in Malaysia and Indonesia is given. A fourth species from the region: *Oxyomus debilis* Harold, 1877 is presented and illustrated first time.

INTRODUCTION

In the course of an examination of material in collection of Institute of Systematics and Evolution of Animals in Kraków, I discovered three new species of the genus *Oxyomus* Dejean, 1833. At present 23 species are known in this genus, but only one from Indonesia - *O. debilis* Harold, 1877. A key to the species from Malaysia and Indonesia is given. Descriptions of the new species are presented below. Habitus and a new locality of *O. debilis* Harold, 1877 are presented, and its membership of the genus *Oxyomus* Dejean, 1833 is discussed.

MATERIAL AND METHODS

The speciemens were observed by using the MBS-10 stereoscopic microscopes. The photos published here were taken by the use of the Meopta laboratory microscope, CMOS5 digital camera with the Helicon Focus programme.

The aedeagus and epipharynx were treated by boiling with a 10% sodium hydroxide solution.

For morphological terms used in the description of epipharyngeal structures I follow terms by Dellacasa, Bordat & Dellacasa (2001).

Each specimen of the new species is indicated by a red, printed label added to the same pin and bearing the status of the specimen (holotype or paratype), sex, its name, name of the author, month and year of the designation.

All specimens mentioned here are deposited in collection of the Institute of Systematics and Evolution of Animals in Kraków, Poland.

Addenda and remarks are found in brackets, separate label lines are indicated by slash (/), separate labels by double slash (//).

RESULTS

Oxyomus malgorzatae sp. nov.
(Figs. 1-5, 22)

Type locality. Indonesia, W Java, Cibodas, 50 km E Bogor, 1400 m.

Type material. Holotype (♂): Java: W Java / Cibodas, 50 km E / Bogor, 1400 m, 03 - 06.xi. / 1989, Agosti, Lőbl / Burckhardt #2a [white printed label] // 2109 / Dok. L. Mencl, 2015 [light green printed label] // HOLOTYPE (♂) / *Oxyomus* / *malgorzatae* sp. nov. / det. Ł. Minkina (08.2015) [red printed label]. Paratype (♀): Java: W Java / Cibodas, 50 km E / Bogor, 1400 m, 03 - 06.xi. / 1989, Agosti, Lőbl / Burckhardt #2a [white printed label] // PARATYPE (♀) / *Oxyomus* / *malgorzatae* sp. nov. / det. Ł. Minkina (08.2015) [red printed label].

Description of holotype. Dorsum (Fig. 3) Total body length 3.2 mm. Body moderately elongate, rather oblong - ovate, convex, rather dull. Whole body, except lateral parts brownish - black.

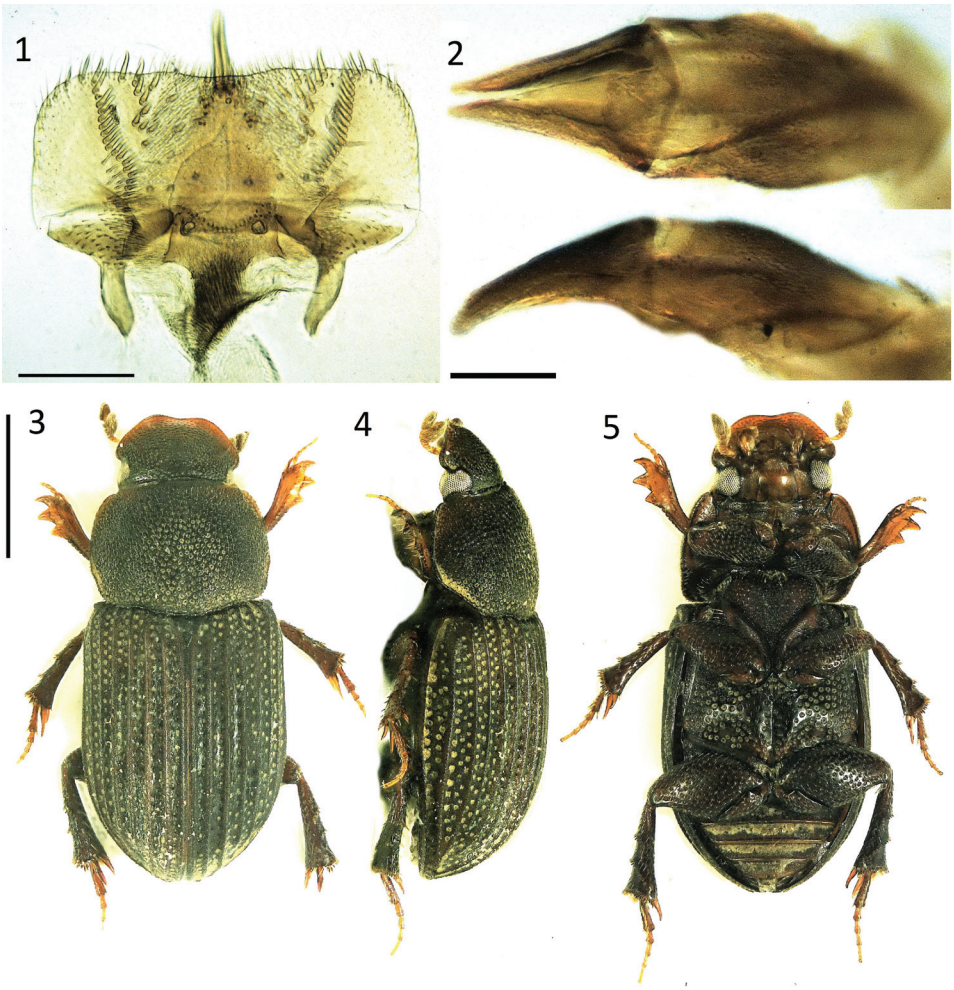
Head (Fig. 22) moderately convex, moderately shiny, with very dense, transverse punctation, sometimes punctures connected with others; punctures in anterior part rounded, much less dense and sparse; all punctures setigerous; epistome feebly gibbous; clypeus sinuate at middle, widely rounded on sides, narrowly bordered, with border very shortly, almost invisibly bristled, weakly separated from anterior margins of genae; genae much more protruding that well developed eyes, rounded, with very short bristles; frontal suture weakly but clearly visible, not tuberculate; very faintly microreticulate.

Pronotum transverse, convex, moderately shiny, coarsely, densely, nearly regularly punctured; punctures setigerous, frequently connected with each other, separated by less than half their diameter; basally with a belt of contiguous, fused punctures; front and basal margin not bordered; hind angles very feebly sinuate; sides bordered, with short setae of similar length as those protruding from punctures; front angles rounded; posterior median longitudinal groove well developed, moderately impressed; microreticulate.

Scutellum dull, triangular, elongate, distinctly raised at middle; without punctation; microreticulate.

Elytra with eight intervals and eight costae, suboval, somewhat widened posteriorly, rather convex; with small but distinct humerał denticles. Intervals rather dull, very wide, deep, with large, somewhat elongate punctures arranged in rows. First interval with the two rows of punctures are combined as a single row in the half of the elytra, seventh interval with three rows of punctures, eighth with a trace of a third row, in the remaining intervals two rows. Costae very narrow, costiform, somewhat shiny, with a row of very short setae on each side. Second, third, seventh and eighth costae combined before apex. Fourth, fifth, sixth and seventh costae somewhat shortened before apex.

Femora shiny, with regular, coarse punctation, without microreticulation; all punctures slightly transverse, rather shallow, with setae. Fore tibiae distinctly tridentate and proximally serrulate at outer margin, their upper side with clearly visible row of stout setae; apical spur elongate, acute, slightly bent outward and downward. Middle and hind tibiae moderately widened apically, with two not very strong transverse carinae, apically fimbriate with spinules rather short, of unequal length. Hind tibiae superior apical spur apically gently hooked,



Figs. 1-5. *Oxyomus malgorzatae* sp. nov., ♂, holotype: 1- epipharynx; 2- aedeagus, dorsal and lateral view; 3- dorsal view; 4- lateral view; 5- ventral view. Figs. 1-2: scale line: 0.1 mm; Figs. 3-5: scale line: 1.0 mm.

slightly longer than inferior apical spur, shorter than first tarsal segment, latter longer as following three combined. Claws slender, regularly arcuate.

Macropterous.

Venter (Fig. 5). Metasternal plate shiny, with distinct median impression; with rather broad, quite deep longitudinal groove in the middle, with a trace of microreticulation, with regular punctation. Punctures dense, coarse, regularly rounded, all of them with setae. Sternites with fine and not regular punctation. Sternites in the middle with distinct microreticulation, but nearby edges shiny, without microreticulation; punctures here arranged in more or less visible, transverse rows.

Aedeagus (Fig. 2) with parameres rather elongate, slightly bent downward, almost acute apically.

Epipharynx (Fig. 1) transverse, nearly rectangular, with lateral sides nearly stright. Corypha with two longitudinal spinules. Prophobae and apophobae with dense, rather long macrosetation. Tormae long.

Sexual dimorphism. In the female, the punctation of the head is less dense, without any punctures connected with others; punctation of pronotum less dense, more regular, only with few punctures connected with others, punctures here separated by about half their diameter. Metasternal plate with less distinct median impression.

Variability. Paratype female length 2.8 mm. In paratype female seventh elytral costa is somewhat shortened before apex, second, third, fifth, seventh, and eighth costae are combined. In the seventh interval only a trace of a third row of punctures is present, in the eighth interval, there are two rows of punctures, and only few additional punctures not arranged in rows.

Distribution. Indonesia: West Java.

Name derivation. The name of the new species is dedicated to my late wife Małgorzata.

Oxyomus nowaki sp. nov.
(Figs. 6-10, 23)

Type locality. Indonesia, N Sumatra, 5 km W Brastagi, Tongkoh, 1450 m.

Type material. Holotype (♂): Sumatra: N Sum. #29a / 5 km W Brastagi / Tongkoh, 1450 m. / 03.xii.1989, Löbl / Agosti, Burckhardt [white printed label] // 2110 / Dok. L. Mencl, 2015 [light green printed label] // HOLOTYPE (♂) / *Oxyomus* / *nowaki* sp. nov. / det. Ł. Minkina (08.2015) [red printed label].

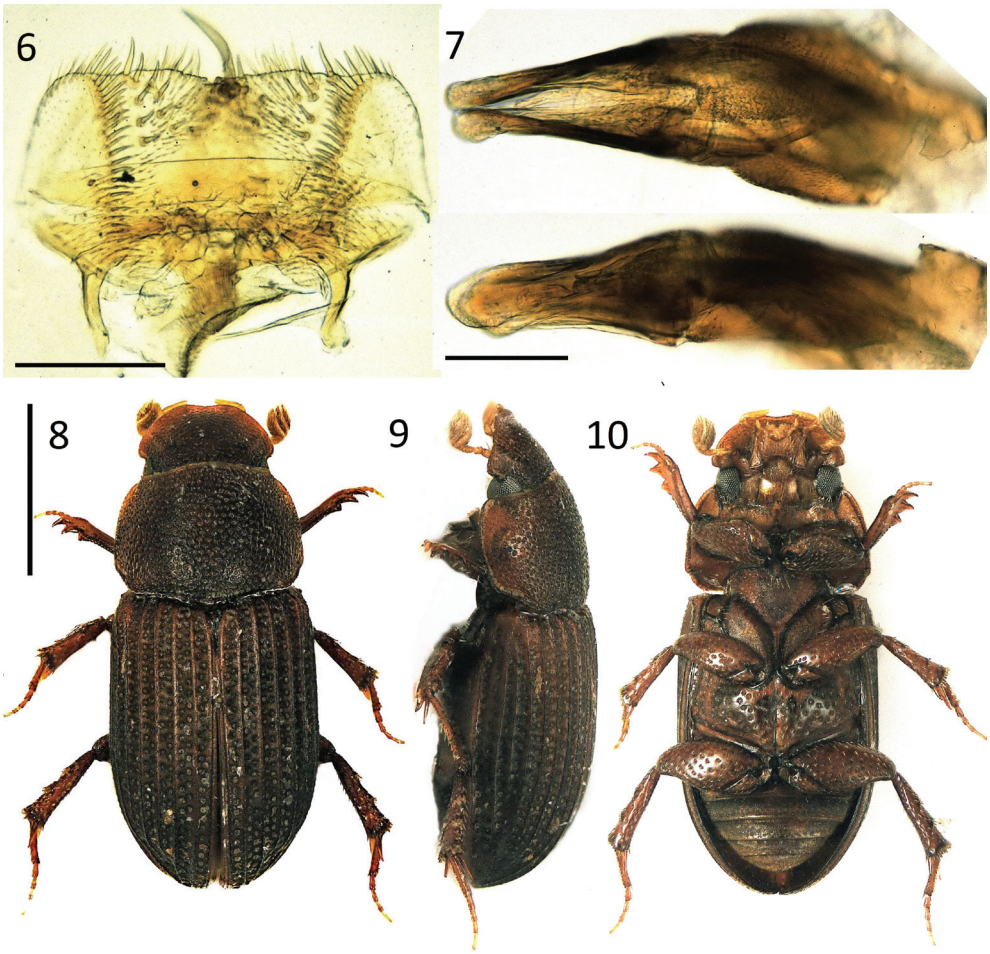
Description of holotype. Dorsum (Fig. 8). Total body length 2.8 mm. Body moderately elongate, rather oblong - ovate, convex, rather dull. Almost the whole body, except lateral parts reddish brown, intervals greyish.

Head (Fig. 23) moderately convex, moderately shiny, with dense, transverse punctation, a few punctures connected with others; punctures in anterior part slightly less dense and sparse; all punctures setigerous; epistome feebly gibbous; clypeus gently sinuate at middle, widely rounded on sides, thinly bordered, with border very shortly, almost invisibly bristled, very weakly separated from anterior margins of genae; genae much more protruding than the well developed eyes, rounded, with very short bristles; frontal suture almost invisible, marked only by very slightly elevated part beetwen punctures, not tuberculate; without microreticulation.

Pronotum transverse, moderately convex, moderately shiny, coarsely, densely, nearly regularly punctured; punctures setigerous, rarely, only near base some of them connected with others, separated by less than half their diameter; anterior and basal margins not bordered; hind angles very feebly sinuate; sides bordered, with short setae of similar length as those protruding from punctures; front angles rounded; posterior median longitudinal groove almost invisible, marked only by extremely shallow impression; with a trace of microreticulation.

Scutellum dull, triangular, elongate, distinctly raised at middle; without punctation; microreticulate.

Elytra with ten intervals, and ten costae; tenth costa only residual, extremely low; elytra suboval, somewhat widened posteriorly, rather convex; with small but distinct humeral denticles. Intervals dull, wide, deep, with rows of large punctures; rows very close to each other. First interval with two rows combined in the basal half of the elytra, eighth to tenth intervals with only one row, the remaining intervals with two rows. Costae very narrow, costiform, somewhat shiny, with a row of very short setae on each side. Fourth, fifth, sixth and eighth costae shortened before apex, eighth significantly so.



Figs. 6-10. *Oxyomus nowaki* sp. nov., ♂, holotype: 6- epipharynx; 7- aedeagus, dorsal and lateral views; 8- dorsal view; 9- lateral view; 10- ventral view. Figs. 6-7: scale line: 0.1 mm; Figs. 8-10: scale line: 1.0 mm.

Femora shiny, with rather regular punctation, without microreticulation. Punctures slightly transverse, all of them with setae. Fore tibiae distinctly tridentate and proximally serrulate at outer margin, their upper side with not clearly visible row of stout setae; apical spur elongate, acute and slightly bent downward.

Middle and hind tibiae moderately widened apically with two not very strong transverse carinae, apically fimbriate with spinules rather short, of unequal length. Hind tibiae superior apical spur slightly longer than inferior apical spur, shorter than first tarsal segment, latter as long as following four combined. Claws slender, regularly arcuate.

Macropterous.

Venter (Fig. 10). Metasternal plate shiny, with moderately deep median impression, with longitudinal groove in the middle, with microreticulation, with rather irregular punctation. Punctures rather dense, varying in sizes, from normal to large, rather regularly rounded, all of them with setae. Sternites dull, with rather not regular punctation, weakly microreticulate; punctures here arranged in more or less visible, transverse rows.

Aedeagus (Fig. 7) with parameres rather elongate, only slightly bent downward, with regulary widened, rounded apex.

Epipharynx (Fig. 6) transverse, nearly rectangular, with lateral sides nearly stright. Corypha with two very long large spinules. Prophobae and apophobae with dense, rather long macrosetation. Tormae long.

Sexual dimorphism. Unknown.

Distribution. Indonesia: North Sumatra.

Name derivation. Name of new species is dedicated to my friend Cezary Nowak.

***Oxyomus mencli* sp. nov.**

(Figs. 11-15)

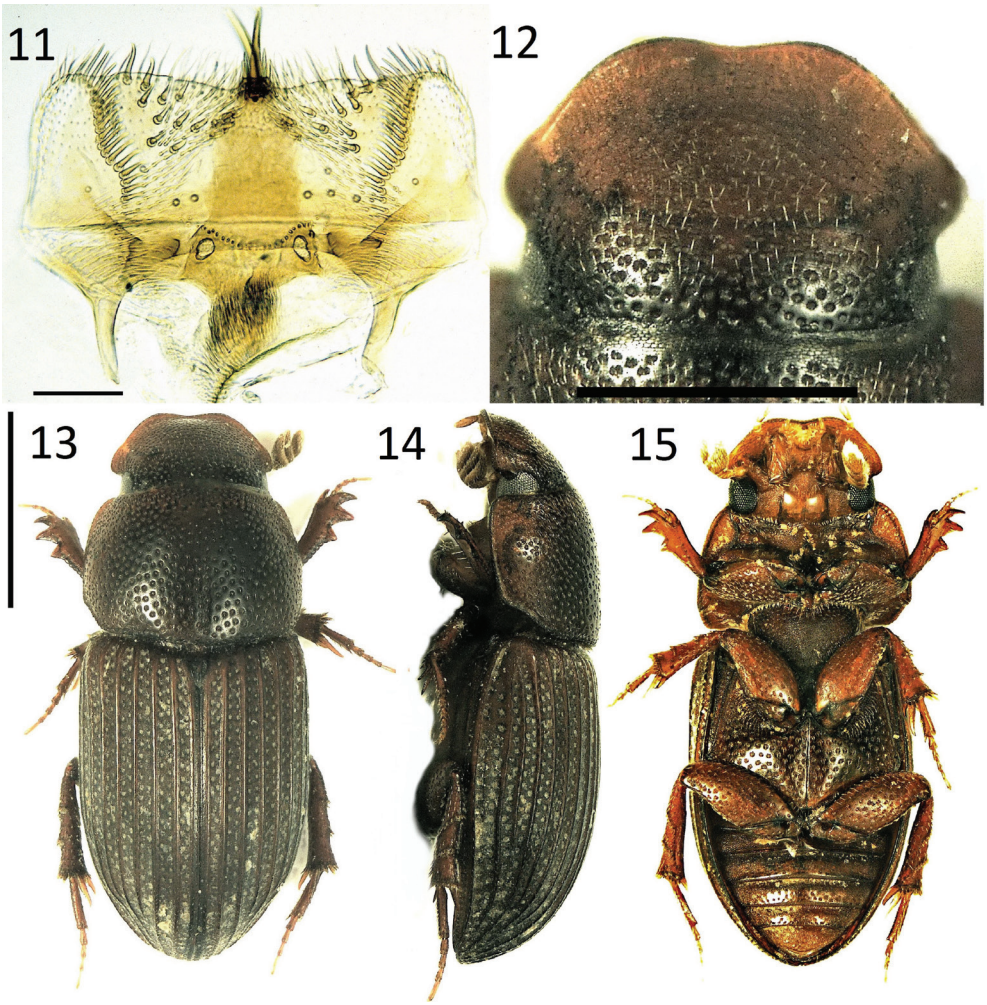
Type locality. Malaysia, Borneo, Sabah Mt., Kinabalu Nat. Pk., Poring Hot Sogs, 495 m.

Type material. Holotype (♀): Borneo Sabah Mt. / Kinabalu Nat. Pk. / Poring Hot Sogs / 495 m 27.viii.[19]88 / A. Smetana [B155] [white printed label] // 2111 / Dok. L. Mencl, 2015 [light green printed label] // HOLOTYPE (♀) / *Oxyomus* / *mencli* sp. nov. / det. Ł. Minkina (08.2015) [red printed label].

Description of holotype. Dorsum (Fig. 13). Total body length 2.8 mm. Body moderately elongate, rather oblong - ovate, convex, rather dull. Almost whole body, except lateral parts reddish brown, intervals greyish.

Head (Fig. 12) moderately convex, moderately shiny, with moderately dense, transverse punctation; punctures in anterior part slightly less dense and sparse; all punctures setigerous; epistome feebly gibbous; clypeus sinuate at middle, widely rounded on sides, narrowly bordered, with border very shortly, almost invisibly bristled, rather clearly separated from anterior margins of genae; genae much more protruding than the well developed eyes, rounded, with very short bristles; frontal suture absent, not tuberculate; moderately microreticulate.

Pronotum transverse, moderately convex, moderately shiny, moderately densely, moderately coarsely, nearly regularly punctured; punctures setigerous, separated by puncture



Figs. 11-15. *Oxyomus mencli* sp. nov., ♀, holotype: 11- epipharynx; 12- head, dorsal view; 13- dorsal view; 14- lateral view; 15- ventral view. Fig. 11: scale line: 0.1 mm; Fig. 12: scale line: 0.5mm; Figs. 13-15: scale line: 1.0 mm.

diameter; front and basal margin not bordered; hind angles feebly sinuate; sides bordered, with short setae of similar length as those protruding from punctures; front angles rounded; posterior median longitudinal groove almost invisible, marked only by extremely shallow impression; slightly microreticulate.

Scutellum dull, triangular, elongate, distinctly raised at middle; without punctation; microreticulate. Raised part rather wide, about one third of the width of scutellum, moderately microreticulate.

Elytra with ten intervals and ten costae, last costa barely visible, but clear; suboval, somwhat widened posteriorly, rather convex; with very small, indistinct humeral denticles.

Intervals dull, rather wide, moderately deep, with rows of shallow, large punctures. First interval with tworows of punctures combined before apex of the elytra, the eighth to tenth intervals with one row of punctures, the others with two rows. Punctation in rows getting shallower toward the apex, absent in apical quarter. Costae rather narrow, costiform, shiny, with row of very short setae on each side. Fourth, fifth and eighth costae shortened before apex, eighth significantly so. Tenth costae beginning at 1/3 length of the elytra, and ending at 3/5 length of elytra.

Femora moderately shiny, with rather regular punctation; with trace of microreticulation. Punctures rather small, slightly transverse, all of them with setae. Fore tibiae distinctly tridentate and proximally serrulate at outer margin, their upper side with not clearly visible row of stout setae; apical spur elongate, acute and slightly bent downward. Middle and hind tibiae moderately widened apically with two not very strong transverse carinae, apically fimbriate with spinules rather short, of unequal length. Hind tibiae superior apical spur slightly longer than inferior apical spur, slightly longer than half first tarsal segment, latter longer than following three combined. Claws slender, regularly arcuate.

Macropterous.

Venter (Fig. 15). Metasternal plate shiny, with moderately deep median impression, with longitudinal groove in the middle, with trace of microreticulation, with rather regular punctation. Punctures of normal size, rather dense, rather regularly slightly transverse, all of them with setae. Sternites shiny, with rather regular punctation, weakly microreticulate; punctures arranged here in more or less visible transverse rows.

Epipharynx (Fig. 11) transverse, nearly rectangular, with lateral sides nearly stright. Corypha with two longitudinal spinules. Prophobae and apophobae with dense, rather long macrosetation. Tormae long.

Sexual dimorphism. Unknown.

Distribution. Malaysia, Borneo, Sabah Mt., Kinabalu National Park.

Name derivation. Name of new species is dedicated to my very cordial colleague Ladislav Mencl.

Oxyomus (?) debilis Harold, 1877

(Figs. 16-21)

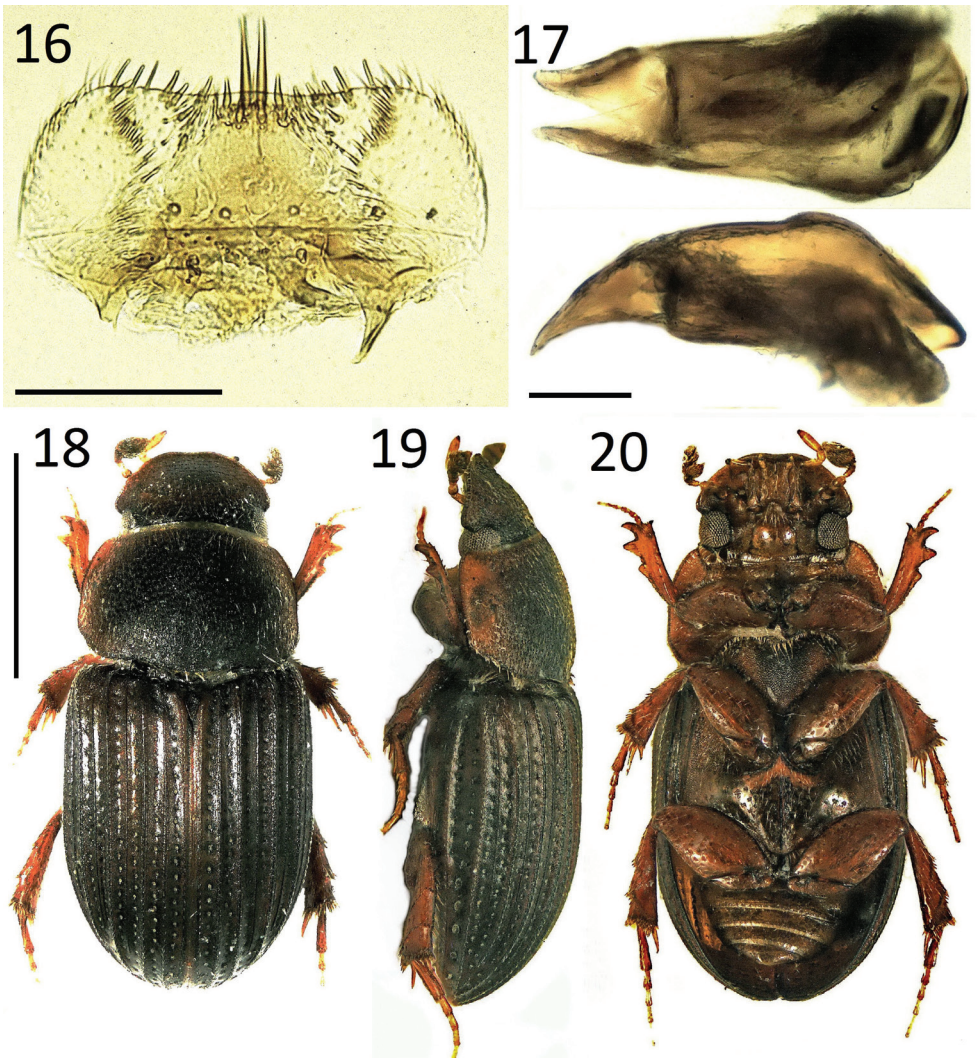
Material studied: 1 spec. Sumatra: Jambi / W Mt Tujuh Lake / 1400 m, 14.xi.1989 / Agosti, Lőbl / Burckhardt #17 [white printed label] // 2107 / Dok. L. Mencl, 2015 [light green printed label] // *Oxyomus* / *debilis* Harold, 1877 / det. Ł. Minkina (09.2015) [white printed label].

Diagnosis (♂). Dorsum (Fig. 18). Total body length 2.4 mm. Body ovate, moderatery convex, rather shiny. Almost whole body, except lighter lateral parts, brownish.

Head (Fig. 21) moderately convex, rather dull, with rather fine, rather sparse, transverse punctation; all punctures setigerous, setae very thin and very long; epistome feebly gibbous; clypeus very slightly sinuate at middle, almoast truncate, widely rounded on sides, thinly bordered, with border very shortly, almost invisibly bristled, rather clearly separated from anterior margins of genae; genae only slightly more protruding than well developed eyes,

rounded, with very short bristles; frontal suture absent, not tuberculate; with moderately microreticulate.

Pronotum transverse, moderately convex, rather dull, rather sparsely, moderately coarsely, nearly regularly punctured; punctures more or less reniform, transverse, setigerous, separated by their diameter; setae very thin and very long; front and basal margin not bordered, basal margin covered by confluent punctures; hind angles truncate; sides bordered, with setae of similar length as those protruding from punctures; front angles rounded; posterior median longitudinal groove almost invisible, marked only by very shallow impression; slightly microreticulate.



Figs. 16-20. *Oxyomus debilis* Harold, 1877, ♂: 16- epipharynx; 17- aedeagus, dorsal and lateral views; 18- dorsal view; 19- lateral view; 20- ventral view. Figs. 16-17: scale line: 0.1 mm; Figs. 18-20: scale line: 1.0 mm.

Scutellum shiny, triangular, elongate, not raised at middle; without punctation; moderately microreticulate.

Elytra with nine intervals and nine costae, suboval, somewhat widened posteriorly, rather convex; without humeral denticles. Intervals shiny, rather wide, moderately deep, flattened before apex, with rows of rather small punctures. Ninth interval with the two rows of punctures combined in apical half of elytra, in other intervals only one row, between juxtasutural costa and sutural margin, there is an extremely short pseudointerval, shorter than scutellum and with only two or three points. Costae rather narrow, odd costiform, even only slightly elevated (without second, that is slightly elevated near base of elytra, but becoming costiform at apex), shiny, with row of very short setae on each side. Fourth to eighth costae shortened before apex.

Femora shiny, with rather regular, rather sparse punctation; without microreticulation. Punctures small, transverse, all of them with very thin and long setae. Fore tibiae distinctly tridentate and proximally serrulate at outer margin, their upper side with clearly visible row of stout setae; apical spur elongate, acute, slightly bent downward, apically inwardly hooked. Middle and hind tibiae moderately widened apically with two not very strong transverse carinae, apically fimbriate with spinules rather short, of unequal length. Hind tibiae superior apical spur slightly longer than inferior apical spur, shorter than first tarsal segment, latter as long as following three combined. Claws slender, regularly arcuate.

Macropterous.

Venter (Fig. 20). Metasternum with punctures irregularly distributed, localised at the plate, in its vicinity, and and arround its borders. Metasternal plate shiny, with shallow median impression, with shallow longitudinal groove in the middle, without microreticulation, with irregular punctation. Punctures rather dense, more dense near the middle, rather small, slightly transverse to reniform, all of them with thin, longitudinal setae. Sternites moderately shiny, with rather regular punctation, weakly microreticulate; punctures here very small, arranged in more or less visible transverse rows. Last sternite with two punctures with thin, very long setae, about two to three times longer than others.

Aedeagus (Fig. 17) with parameres rather short, significantly shorter than phallobase, regularly bent downward, with acute apex.

Fig. 21. *Oxyomus debilis* Harold, 1877, ♂. Fig. 22. *Oxyomus malgorzatae* sp. nov., ♂, holotype. Fig. 23. *Oxyomus nowaki* sp. nov., ♂, holotype. Figs. 21-23: heads. Figs. 21-23: Scale lines: 0.5 mm.

Epipharynx (Fig. 16) transverse, nearly rectangular, with lateral sides broadely rounded. Corypha with two longitudinal spinules. Prophobae and apophobae with dense, rather long macrosetation. Tormae rather long.

Sexual dimorphism. Unknown.

Distribution. Indonesia: Sumatra and Celebes.

KEY TO *OXYOMUS* SPECIES FROM MALAYSIA AND INDONESIA

1(2) Body ovate. Punctures of pronotum more or less reniform, transverse, with very long hair-like setae. Scutellum not raised at middle. Elytra with costae of different heights: odd costiform, even only slightly elevated (excluding the second, which is slightly elevated near base of elytra, but becoming costiform at apex). Elytra with intervals with rather small punctures. Last sternite with two punctures with thin, very long setae, about two to three times longer than others. Males with apical spur of fore tibiae distinctly, hooked inward apically, aedeagus with parameres rather short, distinctly shorter than phallobase. ... *Oxyomus (?) debilis* Harold, 1877

2(1) Body moderately elongate. Punctures of pronotum more or less rounded or transverse, with quite long, normal setae. Scutellum raised at middle. Elytra with all costae of the same height. Elytra with intervals with much bigger punctures. Last sternite without punctures with setae longer than the others. Males (if known) with apical spur of fore tibiae not hooked apically, aedeagus with parameres rather elongate, of about the same length asphallobase 3

3(4) Posterior median longitudinal groove of pronotum well developed, moderately impressed. Elytra with eight intervals and eight costae. ..... *Oxyomus malgorzatae* sp. nov.

4(3) Posterior median longitudinal groove of pronotum almost invisible, marked only by extremely shallow impression. Elytra with more than eight intervals, and more than eight costae. 5

5(6) Clypeus feebly sinuate at middle. Pronotum without microreticulation, with punctures separated by less than half their diameter. Intervals with two rows of punctures, with rows localised closer together. Hind tibiae superior apical spur relatively longer, shorter than first tarsal segment. ..... *Oxyomus nowaki* sp. nov.

6(5) Clypeus more clearly sinuate at middle. Pronotum moderately microreticulate, with punctures separated by their diameter. Intervals with two rows of punctures, with rows localised further away from each other. Hind tibiae superior apical spur relatively shorter, slightly longer than half of first tarsal segment. .... *Oxyomus mencli* sp. nov.

DISCUSSION

Oxyomus debilis Harold, 1877 was only one species known from Inonesia. It is a very distinctive species that can be easly distinguished by the features given in the key, not only from the species from Malaysia and Indonesia, but from all known species of the genus. It is probable that it belongs to a new genus, but without examination of the female I prefer to avoid establishing a new genus. It is probable that female of *O. debilis* Harold, 1877 has the apical spur of the fore tibia straight, and in this case such dimorphism does not occur in the genus *Oxyomus* Dejean, 1833. *O. debilis* Harold, 1877 was know only from Celebes, this is first record for Sumatra.

Oxyomus malgorzatae sp. nov. and *Oxyomus arunae* Stebnicka, 1985 from Nepal are the only two known species with eight costae, however *O. arunae* Stebnicka 1985 has a different shape of the aedeagus, clearly different shape of epipharynx, elytra with costae not joined etc. The general shape of the body is similar to *Oxyomus bremeri* Stebnicka, 1981 from Thailand, but that species has ten costae, posterior median longitudinal groove only slightly impressed, as well as a different shape of the aedeagus and other features.

Oxyomus nowaki sp. nov. in general shape is most similar to *Oxyomus thailandicus* Masumoto, 1991 from Thailand. From that species it can be distinguished by: the shape of parameres, that are only slightly bent downward, and are apically extended and rounded, eighth interval of elytra with only one row of punctures, and a few other small features like small differences in the shape of epipharynx, body less microreticulate.

Oxyomus mencli sp. nov. is most similar to *Oxyomus nubigenus* Petrovitz, 1968 from India and Nepal, but *O. nubigenus* Petrovitz, 1968 has punctures in rows, not becoming shallower toward the apex, intervals eight to ten with two rows of punctures on disc, different shape of aedeagus and other features.

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REFERENCES

Bordat P., Mencl L. & Rakovič M. 2012: *Exoxyomus*, a new genus of the tribe Aphodiini from the Afrotropical region. *Folia Heyrovskyana, Series A* 20(3-4): 117-122.

Dellacasa G., Bordat P. & Dellacasa M. 2001: A revisional essay of world genus-group taxa of Aphodiinae (Coleoptera Aphodiidae). *Memorie della Società Entomologica Italiana* 79: 1-482.

Dellacasa M. 1987: Contribution to a world-wide catalogue of Aegialiidae Aphodiidae Aulonocnemidae Termitotrogidae. *Memorie della Societŕ Entomologica Italiana* 66: 1-455.

Dellacasa M., Dellacasa G. & Gordon R. D. 2014: *Oxyomus mariateresae* new species of Mexican Aphodiini. *Insecta Mundi* 0343: 1-3.

Dellacasa M. & Stebnicka Z. 2001: A new genus for *Oxyomus morosus* and redefinition of *Oxyomus setosopunctatus*. *Acta Zoologica Mexicana* (N.S.) 83: 29-34.

Harold E. von 1877: Enumeration des Lamellicorn coprophages rapportes de l'Archipel Malais, de la Nouvelle Guinee et de l'Australie boreale par M. M. J. Doria, O. Beccari et L. M. D'Albertis. *Annali del Museo Civico di Storia Naturale di Genova* 10: 38-110.

Král D., Rakovič M. & Mencl L. 2015: *Odontoxyomus denticlypeatus*, a new genus and new species of Aphodiini from Laos. *Studies and Reports Taxonomical Series* 11(1): 159-166.

Masumoto K. 1991: Coprophagid-beetles from Northwest Thailand VI. *The Entomological Review of Japan* 46(1): 27-37.

Masumoto K., Kiuchi M. & Wang T.-C. 2014: A New Species of the Genus *Oxyomus* from the Northern Part of Taiwan. *Elytra*, Tokyo, N.S. 4(2): 267-270.

Stebnicka Z. 1982: New species of Aphodiinae from Thailand. *Bulletin de l'Academie Polonaise des Sciences.* Série des Sciences biologiques 29(7-8): 327-331.

Stebnicka Z. 1985: Descriptions of the new species of Aphodiini from Himalayas with notes on other taxa. *Revue Suisse de Zoologie*. Geneve 92(2): 359-366.

Stebnicka Z. 1986: Revision of the Aphodiinae of the Nepal-Himalayas. *Stuttgarter Beitrage zur Naturkunde aus dem staatlichen Museum fur Naturkunde in Stuttgart Ser. A. (Biologie)* 397: 1-51.

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